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Amendments to the Specification: Please replace the abstract with the following:

ABSTRACT

A system for bonding layers (1) of different chemical compositions, such as bonding a thermal barrier layer to a metal substrate on a surface of a gas turbine component. A substrate (4) made either of a ceramic material or particularly of a metal super-alloy may be bonded to an outer layer (16) such as a ceramic by means of a fine-grained intermediate layer (7) bonded to the substrate (4), and a coarse-grained layer (10) bonded to the intermediate layer (7) to create a studded surface (9). The fine and coarse layers (7, 10) provide a transition between the substrate (4) and the outer layer (16) for improved bonding between them. The studded surface (9) may provide at least a 20% increase in bonding surface area for the outer layer (16). Additionally, a medium-grained layer (13) may be applied to the studded surface (9) before applying the outer layer (16).